AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-19. (canceled)

20. (currently amended) A porous silicon-based catalytic system substantially free from catalytic metal, comprising:

i) an average pore diameter comprised between about 1 nm and about 5 nm;

ii) an acidity level of between about 150 μmol/g and about 650 μmol/g and

iii) ~~at least one hydrolysable silicon-based compound or other source of silicon, and~~

~~iv)~~ at least one non-ionic surface active agent, [[and]]

wherein said porous silicon-based catalytic system is prepared from at least one hydrolysable silicon-based compound, or other source of silicon, and

wherein the concentration of the non-ionic surface active agent in a catalyst preparation medium for preparing the

silicon-based catalytic system is in the range of 15 to 25 wt % by weight of the catalyst preparation medium.

21. (previously presented) The catalytic system according to claim 20, consisting essentially of aluminosilicates, borosilicates, zirconio-aluminosilicates or boro-aluminosilicates.

22. (previously presented) A catalytic system consisting essentially of aluminosilicate, and having one or more of the following characteristics taken alone or in combination:

a. an average pore diameter is comprised between about 1 nm and about 5 nm;

b. an acidity level is comprised between about 300 µmol/g and about 500 µmol/g;

c. an Si/AI molar ratio is of about 15; and

d. the preparation of said catalyst system involves at least one hydrolysable silicon-based compound, or other source of silicon, and at least one non-ionic surface active agent.

23. (previously presented) The catalytic system according to claim 20, consisting essentially of an aluminosilicate having a Si/AI molar ratio comprised between about 5 and about 40.

24. (previously presented) The catalytic system

according to claim 23 wherein the Si/AI molar ratio is about 15.

25. (previously presented) A process for the conversion of a light olefin feedstock into oligomer paraffins having from about 10 to about 20 carbon atoms, comprising the following steps:

a) a step wherein said olefin feedstock is contacted with a porous silicon-based catalytic system having an average pore diameter of between about 1 nm and about 5 nm and an acidity level of between about 150 μmol/g and about 650 μmol/g, and prepared from at least one hydrolysable silicon-based compound or other source of silicon, and at least one non-ionic surface active agent;

b) a step wherein the reaction is run at a temperature ranging from about 100 C to about 350 C, and at a pressure comprised between about 0.5 MPa and about 7 MPa; and

c) a step of removing and collecting the final products from the reaction medium.

26. (previously presented) The process according to claim 25, wherein the oligomer paraffins are diesel fractions having a boiling point 180-350 C.

27. (previously presented) The process according to claim 25, wherein the porous silicon-based catalytic system is

chosen from aluminosilicate, zirconiosilicate, borosilicate, phosphosilicate, phosphoaluminosilicate, boro-aluminosilicate and zirconio-aluminosilicate based materials.

28. (previously presented) The process according to claim 25, wherein the porous silicon-based catalytic system is chosen from aluminosilicate, borosilicate, aluminoborosilicate and aluminozirconiosilicate based materials.

29. (previously presented) The process according to claim 25, wherein the porous silicon-based catalytic system is an aluminosilicate-based porous material.

30. (previously presented) The process according to claim 25, wherein the porous silicon-based catalytic system is an aluminosilicate-based porous material having a Si/AI molar ratio of between about 5 and about 40.

31. (previously presented) The process according to claim 25, wherein the porous silicon-based catalytic system is an aluminosilicate-based porous material having a Si/AI molar ratio of about 15.

32. (previously presented) The process according to claim 25, wherein the porous silicon-based catalytic system has

an acidity level comprised between about 300 μmol/g and about 500 μmol/g.

33. (previously presented) The process according to claim 25, wherein the catalytic system comprises an aluminosilicate-based porous catalytic support, prepared with a non-ionic surface-active agent, and optionally at least one catalytic material with one or more of the following characteristics taken alone or in combination:

- an Si/AI molar ratio is comprised between about 5 and about 40;

- an average diameter of the pores has a value from about 1 nm to about 5 nm;

- an acidity level between about 300 μmol/g and about 500 μmol/g; and

- optionally one or more metals chosen from platinum and rhodium, alone or in mixtures, in an overall amount of between 0.05 % and 5 % by weight of the catalytic support.

34. (previously presented) The process according to claim 25, wherein the catalytic system is an aluminosilicate-based porous material prepared from at least one non-ionic surface-active agent and having a Si/AI molar ratio of 15.

35. (previously presented) The process according to claim 25, wherein the porous catalytic system is substantially free from further catalytic metal.

36. (previously presented) The process according to claim 25, wherein the porous catalytic system further comprises one or more catalytic metals chosen from groups 8,9 and 10 of the periodic classification of the elements.

37. (previously presented) The process according to claim 36, wherein the porous catalytic system further comprises one or more catalytic metals chosen from nickel, rhodium, and platinum.

38. (previously presented) The process according to claim 36, wherein the porous catalytic system further comprises one or more metals chosen from rhodium and platinum.

39. (previously presented) The process according to claim 36, wherein the amount of metal(s) is comprised between 0.01 % and 10 % by weight of the porous support.

40. (previously presented) The process according to claim 36, wherein the catalytic system is an aluminosilicate-based porous material prepared from at least one non-ionic

surface-active agent and having a Si/AI molar ratio of 15 and comprising 0.2 % of rhodium.

41. (previously presented) The process according to claim 36, wherein the catalytic system is an aluminosilicate-based porous material prepared from at least one non-ionic surface-active agent and having a Si/AI molar ratio of 15 and comprising 0.2% of platinum.

42. (previously presented) The process according to claim 36, wherein the catalytic system is an aluminosilicate-based porous material prepared from at least one non-ionic surface-active agent and having a Si/AI molar ratio of 15 and comprising 0.2 % by weight of a mixture rhodium/platinum in a 3/1 molar ratio.

43. (previously presented) The process according to claim 25, wherein said light olefin feedstock comprises alkenes or mixtures of alkenes, in all proportions, chosen from among C_2-C_6 alkenes or any olefin-comprising hydrocarbon mixtures.

44. (previously presented) The process according to claim 43, wherein said alkenes or mixtures of alkenes are chosen from among ethene, propene, butenes, pentenes.

45. (previously presented) The process according to claim 43, wherein said alkenes-or mixtures of alkenes are chosen from among C_4 and C_5 alkenes.

46. (previously presented) The process according to claim 25, wherein the reaction temperature is comprised between 100 °C and 350 °C.

47. (previously presented) The process according to claim 25, wherein the reaction pressure is comprised between 0.5 MPa and 7 MPa.

48. (previously presented) Diesel fractions compounds substantially obtained by the process according to claim 25.

49. (currently amended) A method for the conversion of a light olefin feedstock into oligomer paraffins having from about 10 to about 20 carbon atoms, comprising:

reacting a light olefin feedstock with a porous silicon-based catalytic system, wherein said porous silicon-based catalytic system has

i) an average pore diameter of between about 1 nm and about 5 nm;

ii) an acidity level of between about 150 μmol/g and about 650 μmol/g; and

iii) ~~at least one hydrolysable silicon-based compound or other source of silicon, and~~

~~iv)~~ at least one non-ionic surface active agent, [[and]]

wherein said porous silicon-based catalytic system is prepared from at least one hydrolysable silicon-based compound, or other source of silicon, and

wherein the concentration of the nonionic surface active agent in a catalyst preparation medium is in the range of 15 to 25 wt % by weight of the catalyst preparation medium.

50. (previously presented) The method according to claim 49, wherein the oligomer paraffins are diesel fractions with a boiling point 180-350 C.

51. (previously presented) The method according to claim 49, wherein the porous silicon-based catalytic system is chosen from aluminosilicate, zirconiosilicate, borosilicate, phosphosilicate, phosphoaluminosilicate, boroaluminosilicate and zirconio-aluminosilicate based materials.

52. (previously presented) The method according to claim 49, wherein the porous silicon-based catalytic system is chosen from aluminosilicate, borosilicate, boro-aluminosilicate and zirconio-aluminosilicate based materials.

53. (previously presented) The method according to claim 49, wherein the porous silicon-based catalytic system is an aluminosilicate-based porous material.

54. (previously presented) The method according to claim 49, wherein the porous silicon-based catalytic system is an aluminosilicate-based porous material having a Si/AI molar ratio of between about 5 and about 40, preferably about 10 and about 20.

55. (previously presented) The method according to claim 49, wherein the porous silicon-based catalytic system is an aluminosilicate-based porous material having a Si/AI molar ratio of about 15.

56. (previously presented) The method according to claim 49, wherein the porous silicon-based catalytic system has an acidity level of between about 300 μmol/g and about 500 μmol/g.

57. (previously presented) The method according to claim 49, wherein the catalytic system further comprises an aluminosilicate-based porous catalytic support, prepared with a non-ionic surface-active agent, and optionally at least one catalytic material with one or more of the following characteristics taken alone or in combination:

- the Si/AI molar ratio is comprised between about 5 and about 40;

- the average diameter of the pores has a value from about 1 nm to about 5 nm;

- the catalytic material optionally comprises one or more metals chosen from platinum and rhodium, alone or in mixtures, in an overall amount of between 0.05 % and 5 % by weight of the catalytic support.

58. (previously presented) The method according to claim 49, wherein the catalytic system is an aluminosilicate-based porous material prepared from at least one non-ionic surface-active agent and having a Si/AI molar ratio of 15.

59. (previously presented) The method according to claim 49, wherein the porous catalytic system is substantially free from further catalytic metal.

60. (previously presented) The method according to claim 49, wherein the porous catalytic system further comprises one or more catalytic metals chosen from groups 8,9 and 10 of the periodic classification of the elements.

61. (previously presented) The method according to claim 49, wherein the porous catalytic system further comprises

one or more catalytic metals chosen from nickel, rhodium, and platinum.

62. (previously presented) The method according to claim 49, wherein the porous catalytic system further comprises one or more metals chosen from rhodium and platinum.

63. (previously presented) The method according to claim 49, wherein the amount of metal(s) is comprised between 0.01 % and 10 % by weight of the porous support.

64. (previously presented) The porous silicon-based catalytic system according to claim 20, wherein said porous silicon-based catalytic system is obtained from a gel.

65. (previously presented) The method according to claim 49, wherein said porous silicon-based catalytic system is obtained from a gel.